



LEVEL OF ANXIETY STATE DURING TRAINING AND COMPETITION AMONG YOUTH FOOTBALL PLAYERS IN INDIA

Sports Science

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ABSTRACT

Background: Achieving success in professional athletics, especially at the top levels, requires the capacity to manage severe anxiety. The CSAI-2R is a 17-item self-report questionnaire that measures three dimensions of anxiety like cognitive, somatic and self confidence. This provides subscale scores for these dimensions to identify the specific areas of anxiety that are affecting an athlete's performance. This study specifically focuses on identifying changes in anxiety levels both during training and pre competition among youth sub elite competitive football players between the age group of 18 and 25. **Method:** The athletes' anxiety level and self-confidence were evaluated 3 days prior to competition during training and 1 hour pre competition using revised version CSAI 2R. **Results:** The difference in mean score of cognitive anxiety, somatic anxiety and self confidence both during training day and match day was found to be statistically significant (P -Value < 0.05). **Conclusion:** The findings indicate that psychological training, specifically targeting competitive anxiety, such as visualization, self-talk, relaxation techniques, and mindfulness, can assist young athletes in reducing anxiety, improving performance, and overcoming psychological obstacles.

KEYWORDS

Cognitive Anxiety, Somatic Anxiety, self Confidence, sub Elite Youth Football Players

INTRODUCTION

Feeling anxious is a normal human emotion that may manifest in many contexts, including sports activities. Controlled anxieties can benefit athletes by enabling them to focus on their responsibilities and perform at their best(1). Be that as it may, performance might suffer when anxiety levels are too high. Competition stresses and anxiety are a highly researched and commonly referenced topic in the field of applied sports psychology. One such psychometric tool for measuring anxiety in sports is the Competitive Sport Anxiety Inventory-2 (CSAI-2) developed by Rainer Martens and colleagues in 1990, and it is modified to CSAI 2R and is among the most widely used anxiety measures in sports(2).

Achieving success in professional athletics, especially at the top levels, requires the capacity to manage severe anxiety, according to research(3). As a result, the Competitive State Anxiety Inventory-2 has become the instrument of choice for a substantial body of research pertaining to sports anxiety. The CSAI-2R is a 17-item self-report questionnaire that measures three dimensions of anxiety like cognitive, somatic and self confidence. Cognitive anxiety is marked by negative expectations and self-doubts, whereas somatic anxiety is marked by physical symptoms including heightened heart rate, breathing, and muscular tension. The CSAI-2R provides subscale scores for these dimensions to identify the specific areas of anxiety that are affecting an athlete's performance.

According to the aforementioned statement, psychological elements have a significant influence in determining 80% of professional athlete successes, greatly influencing their pursuit of high achievements. The performance of youth athletes is also mostly influenced by their fear, regardless of whether they have been exposed to training and sub elite or elite level competitions. Anxiety is a detrimental emotional condition defined by feelings of uneasiness and concern, sometimes accompanied by heightened physiological arousal(4). Therefore, in addition to facing adverse emotions and experiencing physical stress, the degree of self-assurance and competence one perceives in their

capacity to manage challenges is a vital component of state anxiety as well. This study specifically focuses on identifying changes in anxiety levels both during training and pre competition among youth sub elite competitive football players between the age group of 18 and 25.

METHODS AND MATERIALS

This is a hypothesis testing study involving 26 sub elite football players conducted by the department of sports medicine at chettinad hospital and research institute, Chennai. All participants were male, with ages ranging from 18 to 25 years and a mean age of 19 years. The participants' anxiety level and self-confidence were evaluated 3 days prior to competition during training and 1 hour pre competition using revised version CSAI 2R.

Assessment Method

The Competitive State Anxiety Inventory-2R (CSAI-2R) was used to assess anxiety level in athletes. They were provided with the Questionnaire and asked to respond to each question as honestly as possible. It was given to the participants 3 days prior to competition during training and 1 hour pre competition. To assess the CSAI-2R, assign each item's score based on its apparent worth. The calculation of total scores follows the given procedure: To compute cognitive state anxiety, add together elements 2, 5, 8, 11, and 14. The factors for somatic state anxiety are 1, 4, 6, 9, 12, 15, and 17. The elements for self-confidence are 3, 7, 10, 13, and 16.

Statistical Analysis

The key outcome variables that were investigated were cognitive, somatic, and self-confidence levels during training and pre competition.

The mean difference between the outcome variables on training day and match day were assessed by paired t-test.

P value < 0.05 considered statistically significant

IBM SPSS software was used for statistical analysis.

RESULTS

Among the study population, all of them (N=26) were male football players.

Table 1: Descriptive Analysis Of Age In Study Population (n=26)

Variable	Mean $\pm$ SD
Age	18.84 $\pm$ 1.65
Height	176 $\pm$ 2.1
Weight	71 $\pm$ 3.9

Among the study population, the mean age was 18.84 $\pm$ 1.65, mean height was 176 $\pm$ 2.1 and the mean Weight was 71 $\pm$ 3.9

Table 2 Descriptive Analysis Of Cognitive Anxiety ,somatic Anxiety And Self-confidence At Training In Study Population (n=26)

Parameter	Mean $\pm$ SD	Median	Minimum	Maximum
Cognitive Anxiety At Training	8.76 $\pm$ 1.47	9	6	12
Somatic Anxiety At Training	10.76 $\pm$ 2.08	11	7	15
Self Confidence At Training	13.65 $\pm$ 1.35	13	11	16

Among the study participants, the mean Cognitive Anxiety At Training was found to be 8.76 $\pm$ 1.47, the mean Somatic Anxiety At Training was 10.76 $\pm$ 2.08, the mean Self Confidence At Training was 11.88 $\pm$ 1.81.

Table 3 Descriptive Analysis Of Cognitive Anxiety, Somatic Anxiety And Self-confidence At Match Day In Study Population (n=26)

Parameter	Mean $\pm$ SD	Median	Minimum	Maximum
Cognitive Anxiety On Match Day	9.26 $\pm$ 1.40	9	7	12
Somatic Anxiety On Match Day	11.73 $\pm$ 2.10	12	7	15
Self Confidence On Match Day	11.88 $\pm$ 1.81	12	9	15

Among the study population, the mean Cognitive Anxiety At match day was 9.26 $\pm$ 1.40, the mean Somatic Anxiety At match day was 11.73 $\pm$ 2.10, the mean Self Confidence At match day was 13.38 $\pm$ 1.23.

Table 4 Comparison Of Variables (Cognitive Anxiety) During Training Day And Match Day (n=26)

Variable	Mean $\pm$ SD	Mean Difference	P-value
COGNITIVE ANXIETY at training	8.76 $\pm$ 1.47	0.5	0.009
COGNITIVE ANXIETY at Match Day	9.26 $\pm$ 1.40		

Among the study population, the mean difference in cognitive anxiety training and competition was 0.5 and the p value was 0.009

Table 5 Comparison Of Variables (Somatic Anxiety) During Training Day And Match Day (n=26)

Variable	Mean $\pm$ SD	Mean Difference	P-value
SOMATIC ANXIETY at training	10.76 $\pm$ 2.08	0.97	0.002
SOMATIC ANXIETY at Match Day	11.73 $\pm$ 2.10		

Among the study population, the mean difference in somatic anxiety during training and competition was 0.97 and the p value was 0.002

Table 6 Comparison Of Variables (Self Confidence) During Training Day And Match Day (n=26)

Variable	Mean $\pm$ SD	Mean Difference	P-value
Self Confidence at training	13.65 $\pm$ 1.35	1.77	<0.001
Self Confidence at Match Day	11.88 $\pm$ 1.81		

Among the study population, the mean difference in self confidence during training was 1.77 and the p value was <0.001

DISCUSSION

Anxiety symptoms in competitive sports are frequently associated with worse cognitive performance and overall functioning and are

associated with worse performance outcomes and errors in skill execution. Athletes participating in competitive sports should expect to encounter pre-competitive worry, and how they interpret this fear might influence the impact of its symptoms. A recent study discovered both male and female athletes who were under stress experienced pressure to win, excessive anxiety, annoyance, conflict, aggravation, and fear, all of which had a substantial impact on their mental or emotional health (5). Heavy playing schedules, competition for team positions, the media and fans, as well as the pressure to win trophies, all contribute to players experiencing high stress and anxiety levels (Heather, 2010).

In this study, 26 youth sub elite level football players between the age of 18 to 25 were selected, all the participants were males. They were screened for the fluctuations in anxiety level using the revised version of Competitive State Anxiety Inventory-2 questionnaire.

In a study among 119 football players conducted by Vincent et al., the result showed that the exists of negative correlation between cognitive anxiety and sport performance among football players. In our study, the mean cognitive anxiety during training was 8.76 $\pm$ 1.47 and it was 9.26 $\pm$ 1.40 on Match Day. The mean difference in cognitive anxiety scores between match day and training day was shown to be statistically significant (p-value <0.05). Athletes may experience cognitive anxiety owing to their inability to perform or stress of failing to perform. They are also prone to being anxious about earning unfavorable evaluations from their classmates, teachers, friends, and fans, which can contribute to an increase in cognitive anxiety. Cognitive coping strategies can be used to reduce the level of cognitive anxiety which are positive self-talk, physical activity, goal setting, thinking on practice, thought stopping, remember the worst-case scenario, focus on what you can control, imagery and simulation(6)

Somatic anxiety encompasses the physiological changes experienced by athletes, including heightened perspiration, breathing difficulties, increased heart rate, altered brain wave patterns, elevated blood pressure, increased urination, stomach flutters, reduced saliva production, and muscle tension. The average level of somatic anxiety during training was 10.76 $\pm$ 2.08, whereas on Match Day it was 11.73 $\pm$ 2.10. There was a statistically significant difference in the average cognitive anxiety score between Match Day and training day. (p-value <0.05). In a research among 147 sub elite level football players conducted by Vincent and Yahaya et al., they found out that indian athletes exhibit a higher level of somatic anxiety and also suggested that somatic coping strategies can be implemented on athletes who showed higher level of somatic anxiety which include breathing techniques, meditation, progressive relaxation, Autogenic training and biofeedback.

The mean self-confidence at training was 13.65 $\pm$ 1.35 and it was 11.88 $\pm$ 1.81 on Match Day. The difference in the mean of self confidence was statistically significant (P value <0.05). Our results are in accordance with study conducted by Hakan et al, which states that young football players are prone to negative self-assessment and fear of threatening self esteem which ultimately results in increased cognitive and somatic anxiety and results in decline in performance as well. This is supported by the study conducted by Gonzales et al., which states that competitive anxiety is negatively related to self-confidence.

Our study has shown that self-esteem, physical and cognitive anxiety, and focus disturbance are all important determinants of sub elite level football player's mental preparedness. Psychological conditioning aimed at increasing self-esteem and reducing competitive anxiety among football players has the potential to improve athletes capacity to overcome challenges during the competition, enhance player's specific concentration on vital game objectives, and redirect focus away from undesirable external factors. Likewise, it has the ability to help players optimize their aim, which is frequently characterized by unreasonable expectations and inaccurate assessments of their psychological or athletic abilities. In a comparable manner appropriately aimed short- or long-term behavioral training may aid athletes deal with criticism and overcome adverse emotions that lead to anxiety. Also proper psychological preparation for team sports can improve athletes' emotional awareness, allowing for more thorough interpretation and the employment of more individualized behavioral tactics, and strategies which will help in improving performance.

CONCLUSION

The study found statistically significant changes in cognitive anxiety, somatic anxiety, and self-confidence levels among sub-elite young footballers. These changes were examined during training and competition using the CSAI-2R questionnaire . The findings indicate that psychological training, specifically targeting competitive anxiety, such as visualization, self-talk, relaxation techniques, and mindfulness, can assist young athletes in reducing anxiety, improving performance, and overcoming psychological obstacles.

Appendix

Scale items

No	Competitive State Anxiety Inventory-2R (CSAI-2R)
1	I feel jittery
2	I am concerned that I may not do as well in this competition as I could
3	I feel self-confident
4	My body feels tense
5	I am concerned about losing
6	I feel tense in my stomach
7	I'm confident I can meet the challenge
8	I am concerned about choking under pressure
9	My heart is racing.
10	I'm confident about performing well
11	I'm concerned about performing poorly
12	I feel my stomach sinking
13	I'm confident because I mentally picture myself reaching my goal
14	I'm concerned that others will be disappointed with my performance
15	My hands are clammy
16	I'm confident of coming through under pressure
17	My body feels tight.

Scoring key:

Somatic anxiety: 1, 4, 6, 9, 12, 15, 17; Cognitive anxiety: 2, 5, 8, 11, 14; Self-confidence: 3, 7, 10, 13, 16

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